

# **PROBLEM SUMMARY**

DV

Area

# 03-2050-030-000 FACE REFINER FRONT RADIAL BEARING 3A2M1A

Component

**Hydraulic System** 

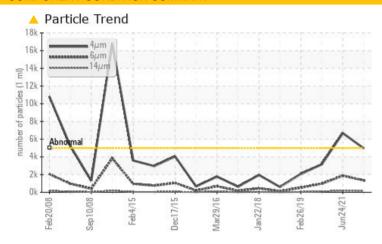
SHELL TELLUS S2 MX 68 (820 GAL)

# -ta-2018 5ta-2018 Feb-2015 Dec2015 Mar2016 Jan/2018 Feb-2019 Jan/2021

Sample Rating Trend



#### **COMPONENT CONDITION SUMMARY**



#### RECOMMENDATION

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

PROBLEMATIC TEST	RESULTS				
Sample Status			ATTENTION	ATTENTION	NORMAL
Particles >6µm	ASTM D7647	>1300	<u> </u>	<u>▲</u> 1871	979
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>19/18/14</b>	20/18/15	19/17/14

Customer Id: MACPEM Sample No.: WC0855138 Lab Number: 02602301 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Kevin Marson +1 (289)291-4644 x4644 Kevin.Marson@wearcheck.com

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com

#### **RECOMMENDED ACTIONS**

Action	Status	Date	Done By	Description
Change Filter			?	We recommend you service the filters on this component.
Check Fluid Source			?	Confirm the source of the lubricant being utilized for top-up/fill.

#### HISTORICAL DIAGNOSIS

#### 24 Jun 2021 Diag: Kevin Marson





We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for topup/fill. Resample at the next service interval to monitor. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



#### 22 Oct 2019 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

# view report

#### 26 Feb 2019 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





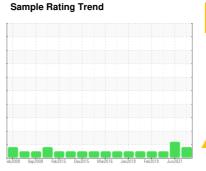
# **OIL ANALYSIS REPORT**

Area 3 Machine Id

# 03-2050-030-000 FACE REFINER FRONT RADIAL BEARING 3A2M1A

**Hydraulic System** 

SHELL TELLUS S2 MX 68 (820 GAL)





#### **DIAGNOSIS**

#### Recommendation

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

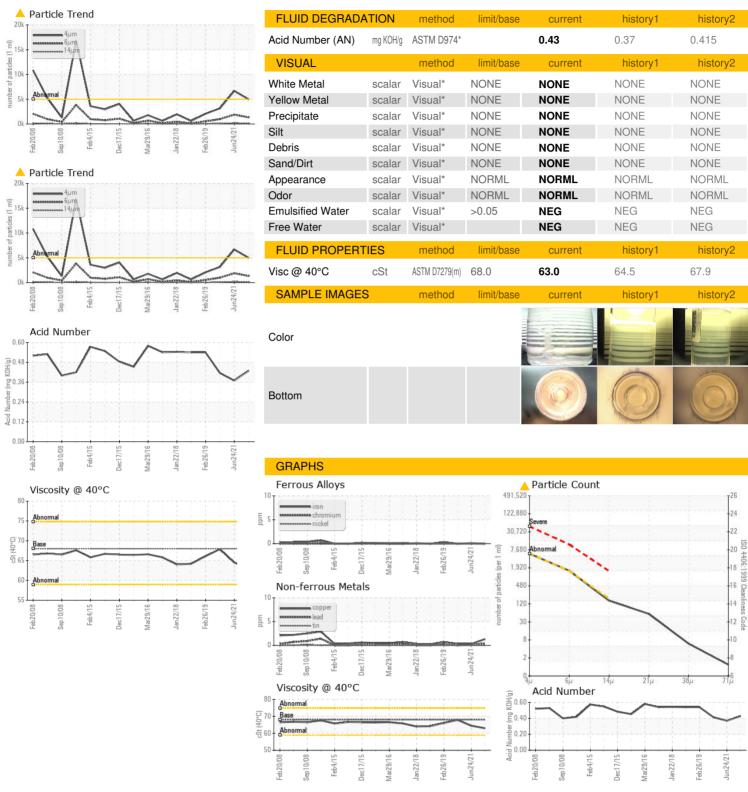
#### **Fluid Condition**

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

		eb2008 Sep2	008 Feb2015 Dec2015	Mar2016 Jan2018 Feb2019	Jun 2021	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0855138	WC0582661	WC0382604
Sample Date		Client Info		07 Dec 2023	24 Jun 2021	22 Oct 2019
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ATTENTION	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	0	<1	0
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)		<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	0	<1	0
Lead	ppm	ASTM D5185(m)	>20	<1	<1	0
Copper	ppm	ASTM D5185(m)	>20	1	<1	<1
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
O - dualine		A OTHER DELICE ( )				
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES	ppm	method	limit/base	0 current	0 history1	0 history2
	ppm	. ,	limit/base			
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current	history1 <1	history2 <1
ADDITIVES Boron Barium	ppm	method ASTM D5185(m) ASTM D5185(m)	limit/base	current <1 <1	history1 <1 <1	history2 <1 <1
ADDITIVES  Boron  Barium  Molybdenum	ppm ppm	method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	limit/base	<pre>current &lt;1 &lt;1 &lt;1 0</pre>	history1 <1 <1 <1 <1	history2 <1 <1 0
ADDITIVES  Boron  Barium  Molybdenum  Manganese	ppm ppm ppm	method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	limit/base	<pre>current &lt;1 &lt;1 0 0</pre>	history1 <1 <1 <1 <1 <1 <0	history2 <1 <1 0 0
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium	ppm ppm ppm ppm	method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	limit/base	<pre>current &lt;1 &lt;1 0 0 63</pre>	history1 <1 <1 <1 <0 25	history2 <1 <1 0 0 <1
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium	ppm ppm ppm ppm ppm	method  ASTM D5185(m)	limit/base	current <1 <1 0 0 63 13	history1 <1 <1 <1 <1 <2 5 25 28	history2 <1 <1 0 0 <1 42
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus	ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	limit/base	current <1 <1 0 0 63 13 289	history1 <1 <1 <1 <1 <2 5 25 28 271	history2 <1 <1 0 0 <1 42 308
ADDITIVES  Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	limit/base	current <1 <1 0 0 63 13 289 353	history1 <1 <1 <1 <1 <0 25 28 271 346	history2 <1 <1 0 0 <1 42 308 373
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	limit/base	current <1 <1 0 0 63 13 289 353 660	history1  <1 <1 <1 <0 25 28 271 346 719	history2  <1 <1 0 0 <1 42 308 373 715
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)		current <1 <1 0 0 63 13 289 353 660 <1	history1  <1 <1 <1 <1 0 25 28 271 346 719 <1	history2  <1  <1  0  0  <1  42  308  373  715  <1
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	limit/base	current  <1 <1 0 0 63 13 289 353 660 <1 current	history1  <1 <1 <1 <0 25 28 271 346 719 <1 history1	history2  <1 <1 0 0 <1 42 308 373 715 <1 history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	limit/base	current  <1 <1 0 0 63 13 289 353 660 <1 current 0	history1  <1 <1 <1 <1 0 25 28 271 346 719 <1 history1 <1	history2  <1  <1  0  0  <1  42  308  373  715  <1  history2  0
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium	ppm	method  ASTM D5185(m)	limit/base >15	current  <1 <1 0 0 63 13 289 353 660 <1 current 0 <1	history1  <1 <1 <1 <1 0 25 28 271 346 719 <1 history1 <1 <1	history2  <1  <1  0  0  <1  42  308  373  715  <1  history2  0  0
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium	ppm	method  ASTM D5185(m)	limit/base >15 >20	current  <1 <1 0 0 63 13 289 353 660 <1 current 0 <1 0	history1  <1 <1 <1 <0 25 28 271 346 719 <1 history1 <1 <1 <1	history2  <1 <1 0 0 <1 42 308 373 715 <1 history2 0 0 <1
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium  FLUID CLEANLIN	ppm	method  ASTM D5185(m)  MASTM D5185(m)  MASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	limit/base >15 >20 limit/base	current  <1 <1 0 0 63 13 289 353 660 <1 current 0 <10 current	history1  <1 <1 <1 <1 0 25 28 271 346 719 <1 history1  <1 history1	history2  <1  <1  0  0  <1  42  308  373  715  <1  history2  0  0  <1
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium  FLUID CLEANLIN  Particles >4µm	ppm	method  ASTM D5185(m)  method  ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20 limit/base >5000	current  <1 <1 0 0 63 13 289 353 660 <1 current 0 current 4959	history1  <1 <1 <1 <1 0 25 28 271 346 719 <1 history1  <1 <1 <1 6683	history2  <1  <1  0  0  <1  42  308  373  715  <1  history2  0  0  <1  history2  3162
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium  FLUID CLEANLIN  Particles >4µm  Particles >6µm	ppm	method  ASTM D5185(m)  method  ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20 limit/base >5000 >1300 >160	current  <1   <1   <0   <0   <63   <13   <289   <353   <660   <1   <1   <0 <urrent <0="" <1="" <4959="" <urrent="" th="" ▲1338<=""><th>history1  &lt;1 &lt;1 &lt;1 0 25 28 271 346 719 &lt;1 history1 &lt;1 &lt;1 &lt;1 &lt;1 1 1 6683 ▲ 1871</th><th>history2  &lt;1 &lt;1 0 0 &lt;1 42 308 373 715 &lt;1 history2 0 0 1 history2 3162 979</th></urrent>	history1  <1 <1 <1 0 25 28 271 346 719 <1 history1 <1 <1 <1 <1 1 1 6683 ▲ 1871	history2  <1 <1 0 0 <1 42 308 373 715 <1 history2 0 0 1 history2 3162 979
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium  FLUID CLEANLIN  Particles >6µm  Particles >14µm	ppm	method  ASTM D5185(m)  method  ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160	current  <1   <1   <0   0   63   13   289   353   660   <1   current   0   <1   0   current   4959  ▲ 1338   135	history1  <1 <1 <1 0 25 28 271 346 719 <1 <1 <1 <1 <1 <1 <1 history1  ▲ 6683 ▲ 1871 ▲ 192	history2  <1 <1 0 0 <1 42 308 373 715 <1 history2 0 0 1 history2 3162 979 92
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINANTS  Silicon  Sodium  Potassium  FLUID CLEANLIN  Particles >4µm  Particles >14µm  Particles >21µm	ppm	method  ASTM D5185(m)  method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	current  <1 <1 0 0 63 13 289 353 660 <1 current 0 <1 0 current 4959 ▲ 1338 135 49	history1  <1 <1 <1 <0 25 28 271 346 719 <1 <1 <1 <1 <1 <1  history1  ▲ 6683  ▲ 1871  ▲ 192 49	history2  <1 <1 0 0 <1 42 308 373 715 <1 history2 0 0 <1 history2 3162 979 92 27



### OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited

Laboratory Sample No. Lab Number **Unique Number** 

: WC0855138 : 02602301

: 5695386 : IND 2

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 11 Dec 2023 Diagnosed : 12 Dec 2023

: Kevin Marson Diagnostician

Test Package To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

Roseburg Pembroke MDF Inc.

777 Fibreboard Drive Pembroke, ON **CA K8A 6W5** Contact: Dan Havis danielh@rfpco.com T: (613)732-3939 F: (613)732-2869